THE PREVENTION OF PERINATAL HIV TRANSMISSION IN LOS ANGELES COUNTY

WHERE WE ARE

IN 2002

Prepared by
The Pediatric Spectrum of HIV Disease (PSD) and
Pediatric HIV Reporting (PHIR) Projects
Acute Communicable Disease Control
Los Angeles Department of Health Services

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By

Toni Frederick, PhD, MSPH

Laurene Mascola, MD, MPH

Janielle Jackson-Alvarez, RN, PHN

Yon Silvia Walker, RN, PHN

Pediatric Spectrum of HIV Disease (PSD)
Pediatric HIV/AIDS Reporting (PHIR)
Acute Communicable Disease Control Program
Los Angeles County Department of Health Services

ACKNOWLEDGMENTS

The authors wish to express sincere appreciation for the invaluable input and support from the following dedicated staff and programs: Thelma Schoen, Neal Lin, and Priya Mukhopadhyay from the Pediatric Spectrum of HIV Disease (PSD) project; Dr. Getahun Aynalem, Pamela Mendoza, and Nancy Salem from the Pediatric HIV/AIDS Reporting (PHIR) project; and the Acute Communicable Disease Control, Epidemiology Unit, and HIV Epidemiology programs of the Los Angeles County Department of Health. They also thank the Centers for Disease Control and Prevention who fund the PSD and PHIR projects, the health care providers in Los Angeles County who care for mothers and children affected by HIV, and finally the children themselves.

This report is made possible by the dedicated work of staff at the hospitals and clinics listed below where data on pediatric HIV/AIDS is being collected:

Cedars-Sinai Medical Center
Children's Hospital of Los Angeles
Harbor – UCLA Medical Center
Kaiser-Permanente Hospitals of Southern California
Long Beach Memorial Miller Children's Hospital
Los Angles County University of Southern California (LAC+USC) Medical Center
Martin Luther King, Jr./ Drew Medical Center
University of California at Los Angeles (UCLA) Medical Center

To obtain additional copies of this report, contact:

Pediatric Spectrum of HIV Disease

Los Angeles County Department of Health Services

313 North Figueroa Street, Room 203

Los Angeles, California 90012

(213) 250-8666

(213) 482-5284 (fax)

online at: lapublichealth.org/acd/pediatric.htm

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EXECUTIVE SUMMARY

Surveillance data on human immunodeficiency virus (HIV) perinatally exposed and infected children are essential to monitor progress toward elimination of perinatal HIV transmission. These data are necessary to 1) accurately monitor perinatal HIV transmission, 2) assess resource needs for prevention and care, 3) evaluate the implementation and impact of perinatal HIV prevention programs, 4) target populations where mother-infant pairs do not obtain timely prenatal care, HIV testing and/or antiretroviral therapy, and 5) evaluate public health recommendations for timely access to care, including HIV diagnostic testing, prophylaxis and treatment.

The Pediatric Spectrum of HIV Disease (PSD) project in collaboration with the Los Angeles County Department of Health Services (LACDHS) is part of the national PSD project of the Centers for Disease Control and Prevention (CDC) collecting data on pediatric HIV exposure and infection in the United States. PSD has collected data in Los Angeles County since 1988. In 1995 the CDC funded the Pediatric HIV Infection Reporting (PHIR) project of LACDHS as one of 22 national pediatric HIV surveillance sites.

In 1994 when zidovudine (ZDV) was demonstrated to substantially reduce perinatal transmission of HIV, the face of perinatal HIV infection changed dramatically. Guidelines regarding the use of ZDV to reduce transmission, and the offering of voluntary HIV counseling and testing of pregnant women were issued in 1994 and 1995, respectively. In California, Senate Bill 889 was enacted in January 1996 mandating the offering of voluntary HIV counseling and testing to all pregnant women and documentation of the offering in the medical chart.

In addition to surveillance activities, PSD and PHIR have conducted several studies evaluating the offering of prenatal HIV counseling and testing in LAC. These studies include telephone surveys with 400 private obstetrician/gynecologists (OB/GYNs) in LAC (1997 and 2000), exit interviews with over 800 prenatal patients at public and private health clinics (2000), monitoring prenatal clinic sites for HIV test acceptance (1989-2001), and reviewing hospital birth records for documentation of prenatal HIV testing. In addition, the LACDHS Los Angeles County

Health Survey (1999-2000) contained questions about prenatal HIV testing. The following are the main findings from these studies:

- Combining the results of the 1997 and 2000 OB/GYN practice surveys showed that:
    a. 99% of the practices reported offering HIV testing to their prenatal patients;
    b. Only 78% of the practices reported that at least three quarters of their patients accepted HIV testing;
    c. Higher patient acceptance rates of HIV testing were associated with receipt of provider HIV training.
- Results of exit interviews with prenatal clinic patients showed that foreign-born pregnant women were less likely to accept HIV testing during pregnancy than American born pregnant women.
- Prenatal HIV test acceptance at LAC public health clinics from 1989-2000 was 71%.
- Review of hospital birth records at one LAC private hospital showed that 83% had documentation that HIV testing was offered, however, test acceptance and test results were not routinely documented.
- The LACDHS Health Survey found that 79% of women who gave birth within 5 years of the survey reported that they were offered an HIV test during pregnancy.

As of June 30, 2002, a total cumulative number of 1,825 HIV-exposed and infected children who were less than 13 years of age at the time of HIV exposure have been reported to PSD. This number includes 610 with HIV infection, 1,057 seroreverters and 158 with indeterminate HIV status. Twelve percent (219) were not living in LAC when diagnosed with HIV infection/exposure. The following summarizes trends in pediatric HIV surveillance and perinatal HIV transmission in LAC:

PEDIATRIC HIV SURVEILLANCE:

- The number of HIV-exposed and infected children reported each year declined 24% from approximately 131 each year in 1990-1998 to approximately 100 children each year in 1999-2001.
- The number and percentage of children reported who were HIV-infected declined from 66% of the total reported in 1988-1990 to 10% in 1999-2001.

- With the widespread use of highly active anti-retroviral therapy (HAART) for pediatric HIV disease, LAC has had only 25 deaths from 1997-2001 compared to 104 deaths for the prior 5-year period (1992-1996).
- Using HIV seroprevalence rates among childbearing women from the California Department of Health Services HIV Survey of Childbearing Women (SCBW, 1988-1995, 1998), and birth statistics for LAC, PSD identified 680 or 80% of the 850 estimated HIV-infected parturient women and their babies born between 1995 and 2001 in LAC.
- 1995 and 1998 SCBW data show that the highest HIV seroprevalence rates among childbearing women were in the Service Planning Areas surrounding downtown Los Angeles that are densely populated with minorities and new immigrants.

PERINATAL HIV TRANSMISSION:

- Maternal ZDV use during pregnancy and/or labor and delivery increased from 87% in 1995 to 98% in 2001.
- Cesarean-section rates increased from 20% in 1995 to 57% in 2001.
- Mother to infant transmission for births reported to PSD declined from 18% in 1996 to 5% in 2001.
- Overall, 18% of the mothers reported to PSD from birth cohorts 1995-2001 had no or unknown prenatal care:
    a. Women with injection drug use (IDU) were at higher risk of no or unknown prenatal care (33%) compared to women without IDU (16%).
- 23 (6%) of 401 children reported from birth cohorts 1998-2001 were HIV infected:
    a. 3 children were treatment failures
    b. 2 mothers tested HIV negative during pregnancy
    c. 3 mothers received prenatal care and were offered prenatal HIV testing, but refused the test
    d. 7 children were born outside LAC
    e. 9 mothers received no or unknown prenatal care
    f. 6 children were known breastfed
    g. 8 children have AIDS

These surveillance data, combined with results of the OB/GYN surveys, exit interviews, and LACDHS Health Survey, suggest that universal offering of prenatal HIV counseling and testing, and the use of ZDV in HIV+ pregnant women is the standard of care in LAC. Together, these two public health interventions have reduced the transmission of perinatal HIV. However, to achieve continued declines in perinatal transmission of HIV infection, further progress is needed to address the gaps in the prevention system:

1) Education and training of both women and providers is needed to decrease the proportion of women in prenatal care who refuse HIV testing.
2) Strategies are needed to encourage more high-risk women to seek prenatal care.
3) Implementation of rapid HIV testing methods (OraQuick was FDA approved in 2002) at labor and delivery for women without prenatal care or women without testing documentation in their medical chart should occur as a standard procedure.

SCOPE OF THE PROBLEM

Transmission of the human immunodeficiency virus (HIV) from mother to child during pregnancy, labor, and delivery, or by breast-feeding, has accounted for virtually all new HIV infection reported among children in the United States (US) (1). As of December 2001, 43,541 AIDS cases were reported in Los Angeles County (LAC), 236 of which occurred in children under the age of 13 years (2). With an estimated perinatal transmission rate of 25-30%, LAC expected 40-50 new reports of pediatric HIV infection each year. However, this scenario changed dramatically in 1994, after the Pediatric AIDS Clinical Trial Group (PACTG) protocol 076 demonstrated that a zidovudine (ZDV) regimen given to HIV-infected women during pregnancy and labor/delivery and to the neonate for the first 6 weeks of life could reduce the risk of perinatal transmission by two thirds (75%) from 26% in placebo to 8% in ZDV recipients (3). This success was the basis for the Public Health Service (PHS) recommendation in 1994 for ZDV treatment to reduce perinatal transmission of HIV (4). In addition, this was also the impetus for the 1995 PHS recommendation regarding routine offering of counseling and testing for HIV during pregnancy (5).

The importance of universal prenatal HIV testing was furthered by studies in 1999 and 2000 showing the efficacy of elective cesarean section in reducing perinatal HIV transmission (6, 7). This led to the American College of Obstetricians and Gynecologists (ACOG) recommending the offering of scheduled cesarean delivery at 38 weeks gestation to an HIV-infected pregnant woman furthering the importance of identifying these women prenatally (8). Recently, the Institute of Medicine (IOM) and the CDC recommended that prenatal HIV testing become universal among pregnant women and a routine part of prenatal care (9, 10). Findings from a CDC study evaluating HIV testing among pregnant women in the US and Canada, 1998-2001, showed that an opt-out voluntary testing approach had among the highest testing rates of all the approaches evaluated (11).

In 1989, the LAC Department of Health Services (LACDHS) designed pilot projects in certain health centers to offer universal voluntary HIV counseling and testing. In 1995, LACDHS recommended that all prenatal care patients receive HIV counseling and the offering of voluntary HIV testing. In 1996, California Senate Bill 889 mandated that all prenatal caregivers

in California offer voluntary HIV counseling and testing and document the offering in the medical chart. Despite the more recent CDC and IOM recommendations and community efforts to get a more comprehensive bill making prenatal HIV testing a routine part of prenatal care, California has not updated its legislation since 1996.

Despite important successes made in HIV prevention, some women and infants nationwide and in LAC still do not benefit from antiretroviral therapy due to a disruption in the perinatal HIV transmission continuum of care. This continuum begins with pre-conception and continues through postpartum care. Missed opportunities at any point may increase the risk of HIV transmission. The cascade of services should include prenatal care, education about the importance of prenatal HIV testing, the recommendation for voluntary HIV testing, and post-test counseling. For the HIV-infected woman, services should include antiretroviral treatment for her own health and to prevent perinatal transmission, counseling about the avoidance of breast-feeding, and referrals to HIV specialists for the care and management of labor and delivery including the potential role of cesarean section in preventing transmission. Data suggest that LAC women who may not be accessing these services include, among others: substance abusers, incarcerated women, undocumented persons, non-English speakers, the uninsured, homeless, teens, and those who are unaware of or in denial about their risk for being HIV infected.

DESCRIPTION OF THE PROJECTS

In LAC, The Pediatric Spectrum of HIV Disease (PSD) and the Pediatric HIV/AIDS Infection Reporting (PHIR) projects of the Los Angeles County Department of Health Services collect data on pediatric HIV/AIDS, the offering of prenatal HIV testing, and the treatment and follow-up of HIV- infected and exposed children.

Pediatric Spectrum of HIV Disease (PSD)

The PSD project (formerly known as PASS or the Pediatric AIDS Surveillance Study) has been collecting data on pediatric HIV exposure and infection in LAC since 1988 as part of a national CDC surveillance and research effort. PSD has two public health nurses who routinely visit all pediatric HIV specialty clinics in the county, which are: Los Angeles County-University of Southern California Medical Center (LAC+USC), the University of California at Los Angeles (UCLA), Harbor-UCLA Medical Center, Children's Hospital Los Angeles, Long Beach Memorial Miller Children's Hospital, Martin Luther King, Jr./Drew Medical Center, Kaiser-Permanente Hospitals of Southern California, and Cedars-Sinai Medical Center. In LAC, HIV-exposed and infected children are referred to one of these specialty sites for HIV evaluation or care. PSD collects information at baseline when the child first presents for care, and then prospectively every 6 months to record new symptomatology, immunologic status, virologic status, therapeutic interventions, and changes in social situation. PSD follows all infected children through adolescence and young adulthood (while seen in a pediatric or adolescent clinic). As of June 30, 2002, 1,825 HIV-exposed and infected children who received care in LAC had been reported to and followed by PSD.

PSD routinely reviews pediatric death certificates, reviews data on prenatal HIV counseling and testing in six LAC county DHS clinics, participates in expert panels and provides expert consultation. PSD also performs special studies such as monitoring for side effects of ZDV and highly active anti-retroviral therapy (HAART), surveying private OB/GYN providers, and reviewing hospital prenatal records for HIV counseling and testing documentation. PSD summarizes data for HIV providers, national and international meetings, and publications. The principal investigators also act as experts on national pediatric HIV committees.

Pediatric HIV/AIDS Infection Reporting (PHIR)

The Pediatric HIV Infection Reporting (PHIR) Project began in 1994 as a CDC funded project to conduct pediatric HIV surveillance among children (<13 years of age) residing in LAC. On a monthly basis, PHIR reports AIDS cases by name and HIV-infected cases by unique identifier (as of July 1, 2002 HIV became reportable) to the State of California. Data elements collected on the Pediatric HIV/AIDS Confidential Case Report Form include: AIDS defining conditions, birth history data, maternal HIV risk, prenatal care, maternal use of ZDV and antiretroviral therapy, and neonatal prophylaxis for *Pneumocystis carinii* pneumonia (PCP) and HIV. Laboratory data on viral load, CD4+ T-lymphocytes, and antigen tests are also collected. PHIR established a procedure to promptly notify CDC of unusual occurrences of HIV transmission, as in cases of sexual abuse of children. Children who are HIV-exposed yet uninfected cannot be reported to the State. However, with Institutional Review Board approval, reports of exposed children using unique identifiers are sent directly to the CDC as part of an HIV exposure surveillance study.

PHIR staff conducted an evaluation of the offering and acceptance of prenatal HIV testing at public and private prenatal clinics. This evaluation assessed the availability of HIV educational materials including pamphlets and videos in the prenatal setting. This evaluation determined the need for targeted prevention efforts among at-risk pregnant women.

PHIR is also a site participating in the CDC national Enhanced HIV/AIDS Surveillance To Maximally Reduce Perinatal HIV Transmission project. A standardized form is used to collect data about maternal knowledge of perinatal HIV infection, the use of maternal and neonatal ZDV, and the use of other antiretrovirals for birth cohorts since 1999.

PHIR and PSD participate in the CDC's CityMatCH Perinatal HIV Urban Learning Cluster. This project brings together the LACDHS Maternal and Child Health Program, the Office of AIDS Programs and Policy and other agencies working in the field of perinatal HIV infection to discuss program and policy issues around the prevention of perinatal HIV transmission. The LAC Learning Cluster meets quarterly and participates in national meetings with other CityMatCH partners around the country.

PREVENTION OF PERINATAL HIV INFECTION IN LAC:

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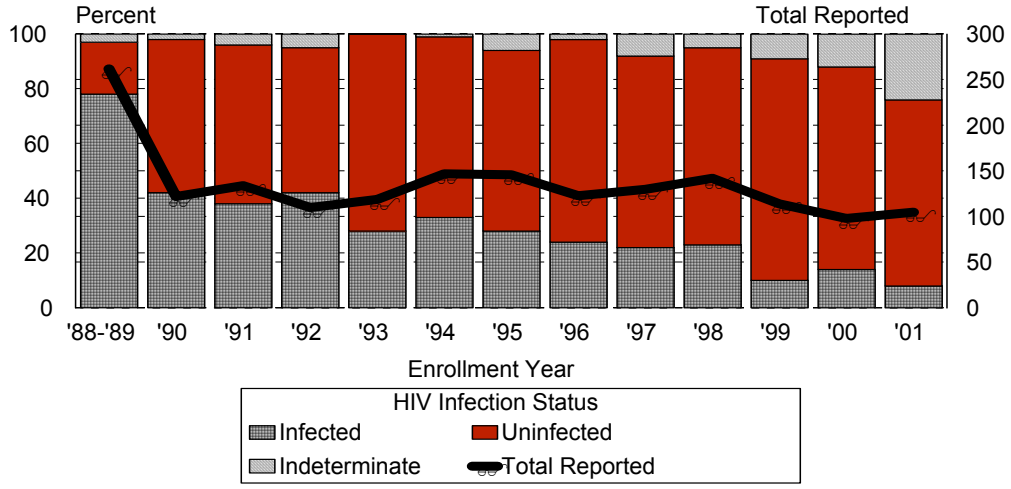
Pediatric HIV Prevalence and Reporting

In 1988-89 when PSD began, the project enrolled 262 prevalent cases of pediatric HIV exposure and infection, and all previously reported AIDS cases including those who had died. From 1990-1998, an average of 131 HIV-exposed and infected children were reported annually. From 1999 to 2001, the numbers reported declined 24% due to an overall declining birth rate in LAC and the reduction of HIV-infected children being referred to LAC for care (Figure 1). Overall, the total number and percentage of infected children reported has declined from 255 or 66% of the total enrolled in 1988-90, to only 33 children or 10% in 1999-2001 (Figure 1).

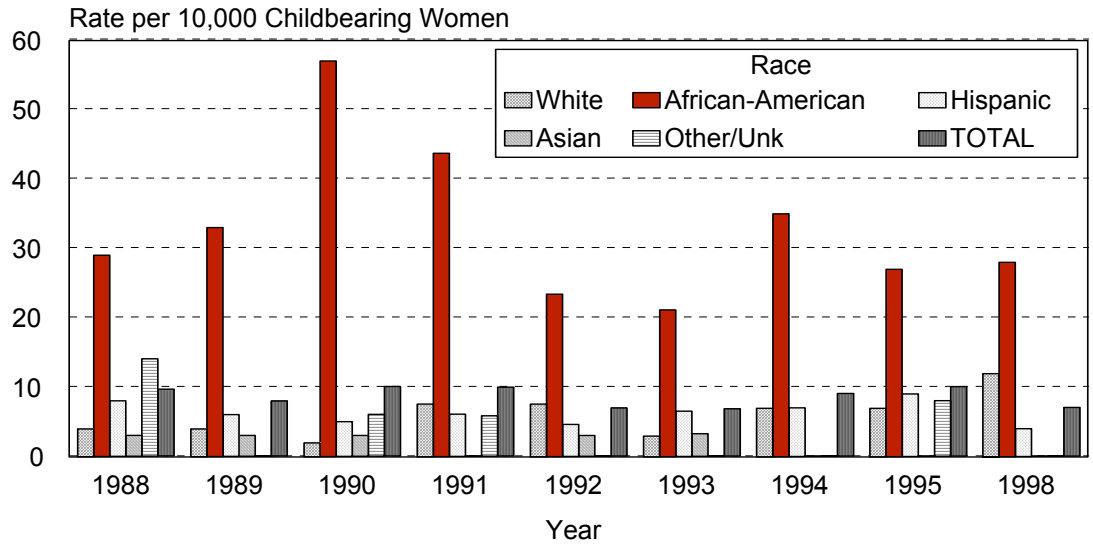
Figure 1. Children Reported by HIV Infection Status and Enrollment Year, PSD, LAC (n=1753)



From 1988-1995 and 1998, the California Department of Health Services conducted the HIV Survey of Childbearing Women (SCBW) (12). Heel stick specimens of all newborns in California were tested during July-August for antibodies to HIV. Results for LAC showed that the seroprevalence of HIV among childbearing women remained stable at about 0.1% for the

past 10 years with substantially higher rates among African American women throughout (Figure 2).

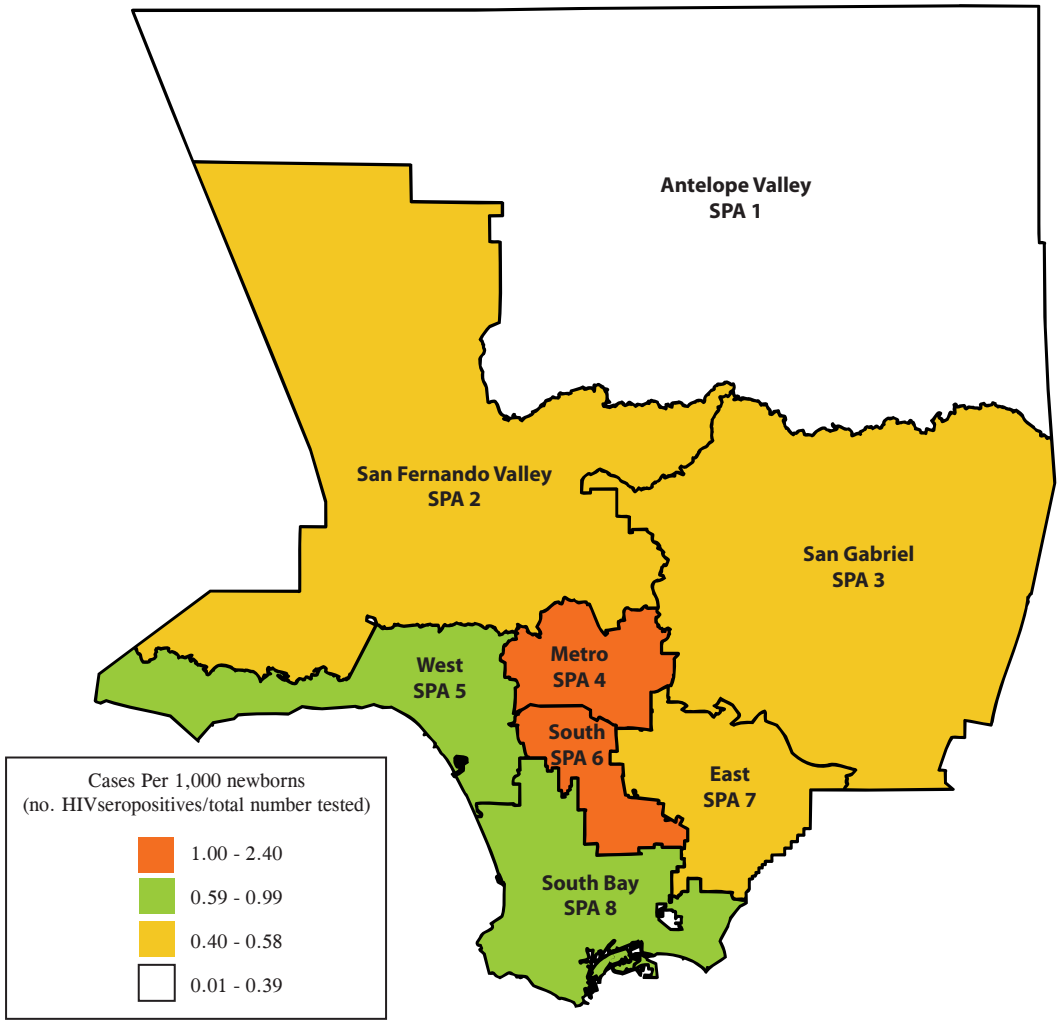
Figure 2: LAC HIV Seroprevalence Rate Among Childbearing Women, State of California Office of AIDS, 1988-1995, 1998



Seroprevalence rates were calculated by LAC Service Planning Areas (SPAs) for years 1988 through 1993 and then again for 1995 and 1998. Rates were divided into quartiles based on the overall distribution of rates. As shown in Figures 3 and 4, Metro and South SPAs had the highest rates for both time periods and East SPA moved into the highest quartile in 1995 and 1998.

Figure 3:

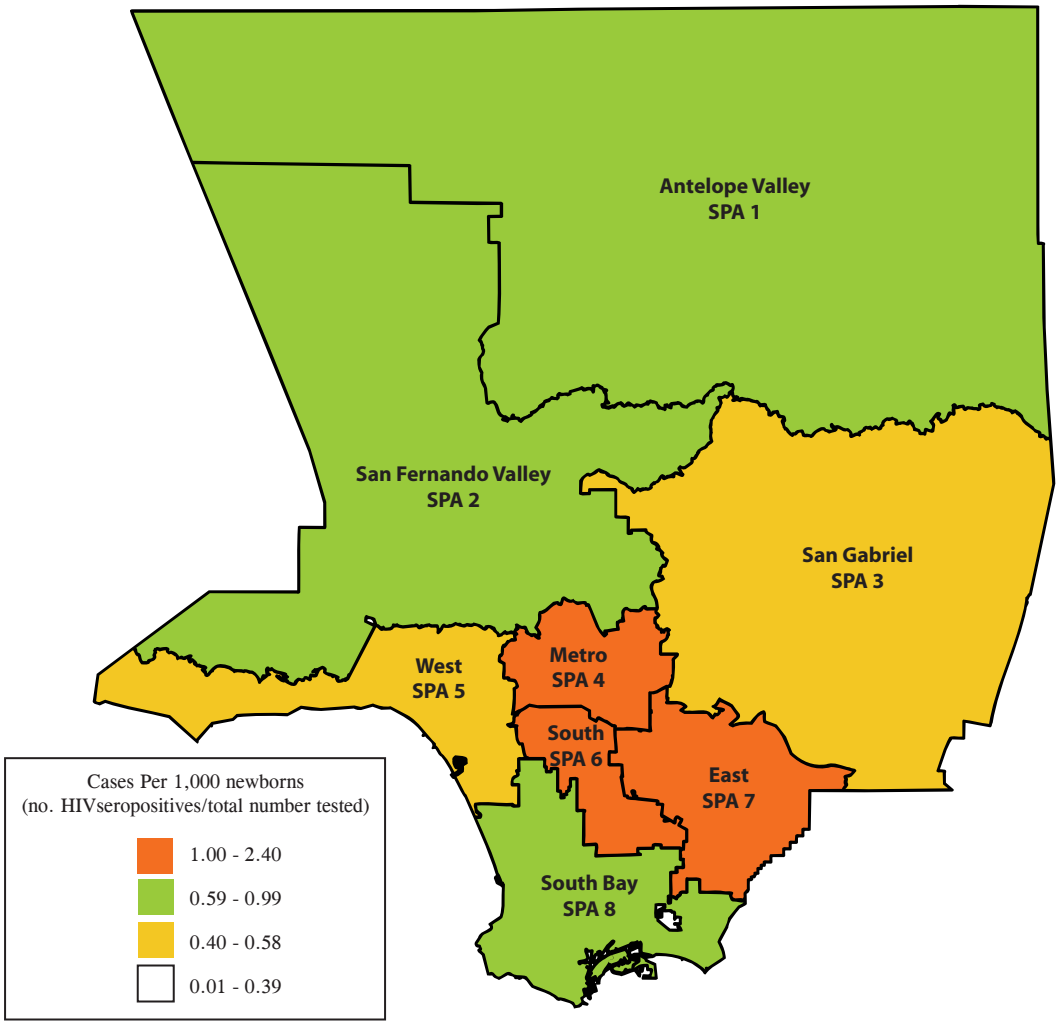
Rates of Human Immunodeficiency Virus (HIV) - Seropositive Newborns Los Angeles County by Service Planning Areas, 1988 - 93 (Total Tested: 299,905 Total Positive: 254)



HIV seroprevalence data provided by the State of California Department of Health Services, Office of AIDS, Survey of Childbearing Women.
Birth data provided by the Los Angeles County Department of Health Services.

Figure 4:

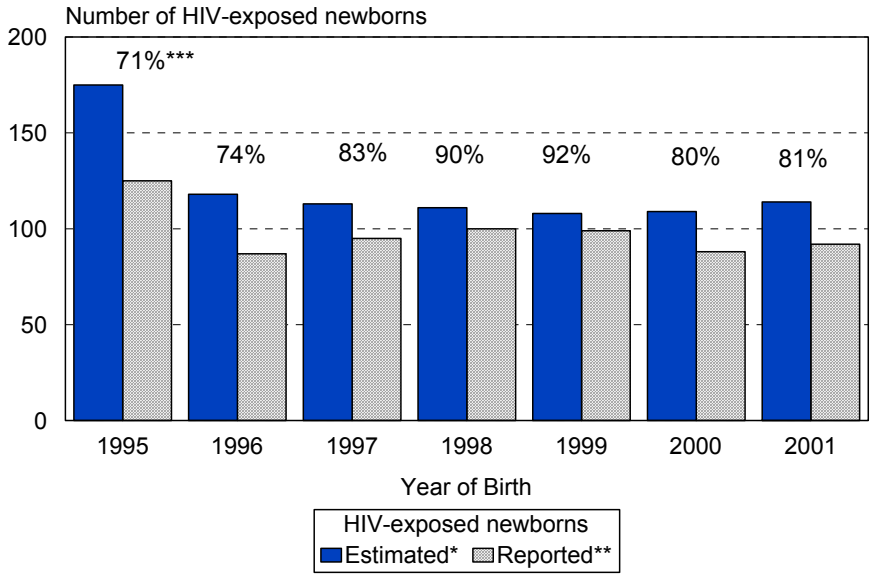
Rates of Human Immunodeficiency Virus (HIV) - Seropositive Newborns Los Angeles County by Service Planning Areas, 1995 and 1998 (Total Tested: 79,242 Total Positive: 65)



HIV seroprevalence data provided by the State of California Department of Health Services, Office of AIDS, Survey of Childbearing Women.
Birth data provided by the Los Angeles County Department of Health Services.

Using the 1995 HIV seroprevalence rate for birth years 1995-1996, the 1998 seroprevalence rate for birth years 1998-2001, and the annual number of births in LAC, we estimated that approximately 850 HIV-exposed babies were born from 1995-2001 in LAC. As of June 2002, 681 or 80% had been reported to PSD. The other 20% have either moved outside of LAC or have yet to be identified as HIV exposed. The proportion of babies identified and reported to PSD has increased over time from 71% in 1995, to 78% or higher after 1996 (Figure 5).

Figure 5: Estimated and Reported HIV-exposed Infants Born in LAC, PSD

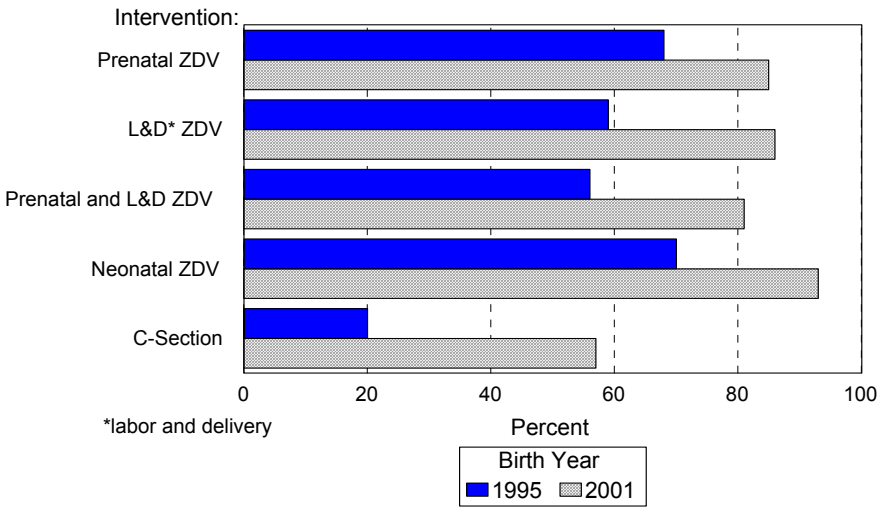


*Estimated from number of births in LAC and HIV seroprevalence rate among childbearing women, HIV Survey of Childbearing Women, California State Office of AIDS
**Children reported to PSD as of 6/02
***Each percentage calculated as reported/estimated

In 1998, the SCBW tested each HIV positive specimen for the presence of ZDV. In LAC, 77% of the specimens were positive for ZDV. The 23% with no evidence of ZDV represent the potential missed opportunities for prevention. With 115 HIV-exposed newborns expected each year in LAC, 23-26 might be potentially missed opportunities for prevention. Using a 25% mother-to-infant transmission rate for the missed opportunities, LAC would expect 5-7 newly infected infants each year.

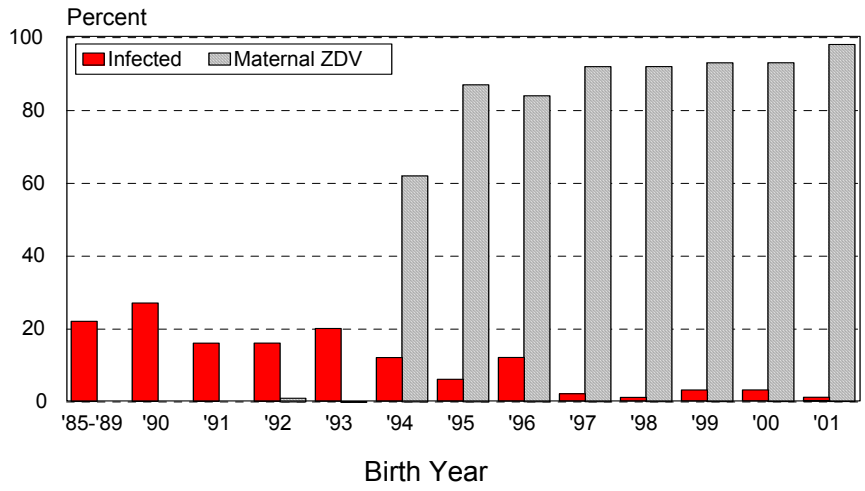
Since the announcement of the PACTG 076 results, PSD data show an increasing use of maternal ZDV to prevent perinatal transmission. For the 1995 birth cohort, 66% of the mothers received ZDV during pregnancy, 59% received ZDV during labor/delivery, 56% received ZDV during pregnancy and labor/delivery, and 70% of the newborns received neonatal ZDV. For the 2001 birth cohort, 85% of the mothers received ZDV during pregnancy, 86% during labor/delivery, 80% during pregnancy and labor/delivery, and 93% of the newborns received neonatal ZDV. C-section rates of mothers reported to PSD have also increased from 20% in the 1995 birth cohort to 57% in the 2001 cohort (Figure 6).

Figure 6: ZDV Intervention and C-Section Rate for Children Born 1995 and 2001, PSD, LAC



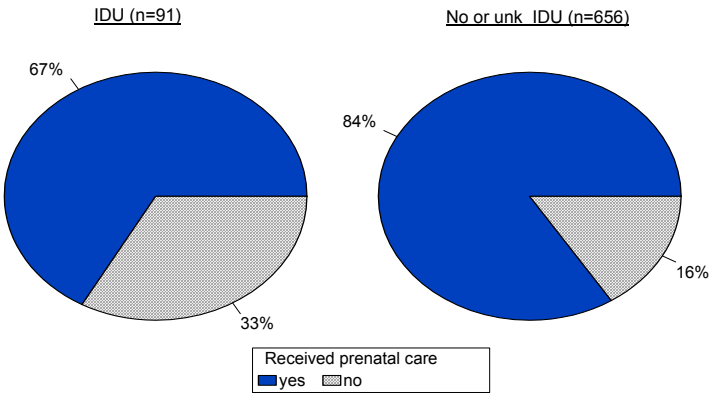
Early identification and treatment of HIV-infected pregnant women has led to a dramatic decrease in perinatal HIV transmission in LAC. Among children identified at birth with HIV exposure, HIV transmission rates were 28% in 1990, 17% in 1992 and 14% in 1994. After the increasing use of ZDV in 1994, transmission rates fell to 12% in 1996, and between 1% and 3% from 1997 to 2001 (Figure 7). Transmission rates among all births (including those identified as HIV-exposed after birth) were 18% in 1996, 11% in 1997, and between 5% and 7% from 1998 to 2001.

Figure 7: Rates of Perinatal HIV Transmission and Maternal Zidovudine (ZDV) Use for Children Identified at Birth by Birth Year
PSD, LAC, 1985-2001



Because treatment is highly effective in preventing vertical transmission, those at highest risk for transmitting HIV to their newborns are women without prenatal care. Overall, 18% of the mothers reported to PSD from birth cohorts 1995-2001 had no or unknown prenatal care and therefore never had the opportunity for HIV counseling and testing or antiretroviral treatment during prenatal care. These women were more likely to transmit HIV (28%) than those with prenatal care (7%) ($p<.0001$). Mothers with reported injection drug use (IDU) were significantly ($p<0.0001$) less likely to receive prenatal care (67%) compared to those without IDU (84%) (Figure 8). Overall in LAC, less than 1% of all pregnant women received no prenatal care indicating that HIV-infected women overall, and infected women who are IDUs, are at a higher risk of not having prenatal care than all women in LAC.

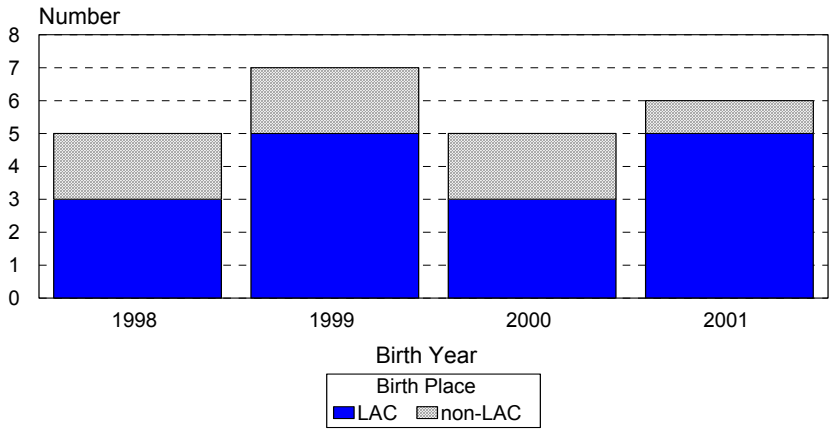
Figure 8: Prenatal Care by Injection Drug Use (IDU) Status of the Mother, 1995-2001 Births, PSD, LAC



Chi-square test significant at <.0001

A total of 23 (6%) of the 401 HIV-exposed children reported from birth cohorts 1998-2001 were HIV-infected with 7 infected children born outside of LAC (Figure 9). Three children or 14% represented treatment failures, i.e. the mother received some treatment during pregnancy, labor or delivery, and/or the newborn received treatment as a neonate. The remaining 19 mother/infant pairs received no prophylactic antiretroviral treatment. Three mothers of 4 children refused testing, 2 mothers tested negative during pregnancy, and 9 received no or unknown prenatal care. Six children were breastfed. Eight of the 23 (35%) HIV-infected children reported have AIDS: five presented for care with *Pneumocystis carinii* pneumonia (PCP). If the mothers with no or unknown prenatal care had been HIV tested at presentation to the hospital with either the OraQuick rapid test now approved by the federal government (13) or expedited ELISA TEST, treatment during labor and delivery and to the newborn could have been an option.

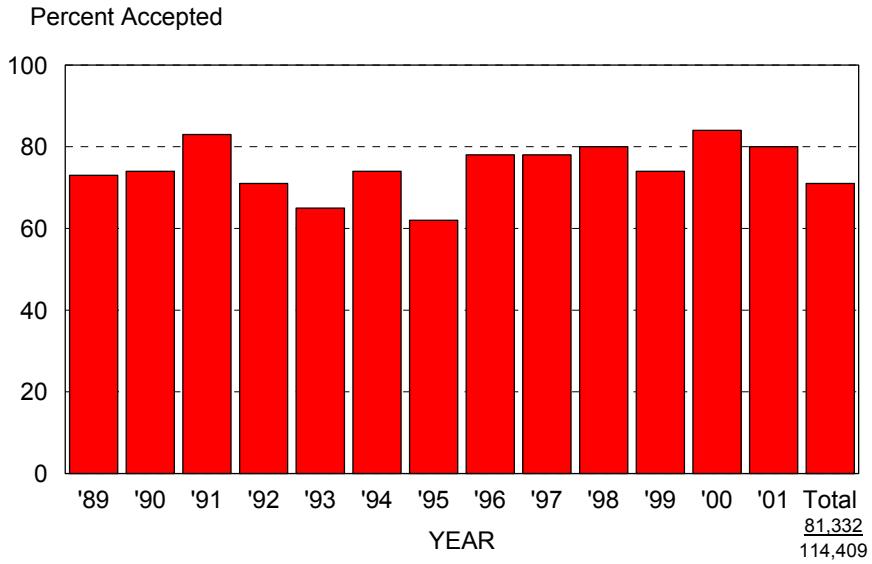
Figure 9: Perinatally Infected Infants Born 1998-2001 by Birth Place
PSD, LAC, (n=23)



Prenatal HIV Counseling and Testing

In 1989, LAC began a pilot project in select public health centers to offer universal prenatal HIV counseling and testing to all pregnant women. The LACDHS mandated this policy for all public health centers and hospitals in January 1995. In January 1996, the State of California passed SB889 that mandated the routine offering of voluntary prenatal HIV counseling and testing to all prenatal patients along with documentation of that offering in the medical record. PSD followed test acceptance rates for six county health centers. Overall, from 1989-2001, test acceptance rates have averaged 71% (Figure 10).

Figure 10: LAC Prenatal HIV Screening Project Acceptance Rates by Year, Feb 1989 - Dec 2001



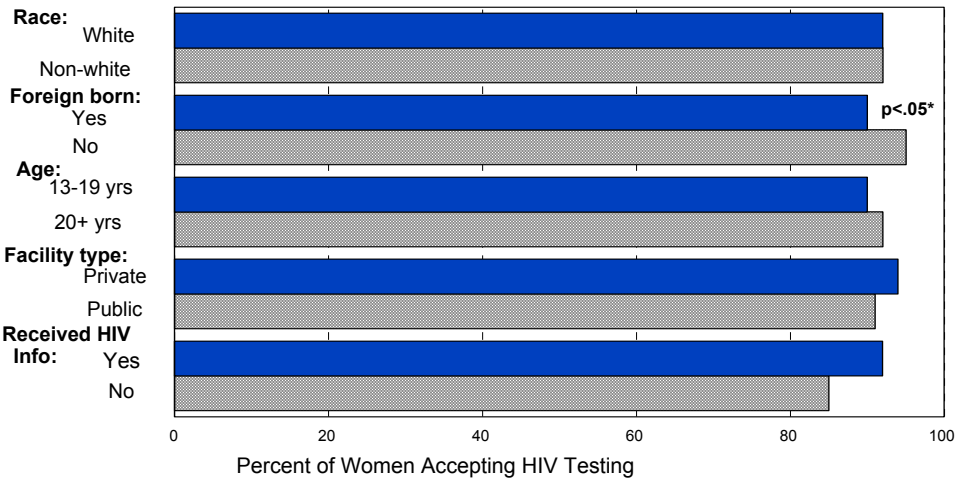
Data reflects varying numbers of reporting clinics annually.

PHIR evaluated the offering of perinatal HIV counseling and testing in public and private prenatal clinics in LAC through personal interviews with pregnant women at their first prenatal visit. The interviewer asked women if they received information about HIV treatment, if they were offered the HIV test, and if they accepted the HIV test. If a pregnant woman did not accept the HIV test, the interviewer asked for the reasons for refusal. The clinics were selected in geographic areas of both high rates of AIDS among women, and live births of more than

3,000 during 1998. In addition, hospitals with 10% African American and 30% Hispanic live births were selected.

Between June 2000 and June 2001, 826 pregnant women were interviewed after their first prenatal visit at 15 public and private prenatal clinics. Interviews were conducted in both Spanish and English. Ninety-nine percent reported that they were offered the HIV test, 97% said they received information about HIV and pregnancy, but only 50% received information about HIV treatment and pregnancy. The test refusal rate was 8% with 45% of the refusers reporting that they had already been tested. Another 38% of the refusers reported that they were monogamous and 17% indicated other reasons. Pregnant women born in the US were significantly ($p<.05$) more likely to accept the prenatal HIV test than pregnant women born outside of the US. Although statistical significance was not reached, those who received HIV information and those seen at private prenatal clinics were more likely to accept prenatal HIV testing than those without information and those seen at public clinics (Figure 11). To ensure high HIV test acceptance rates, HIV information and counseling and greater attention to pregnant women born outside of the US must be an integral component of prenatal care.

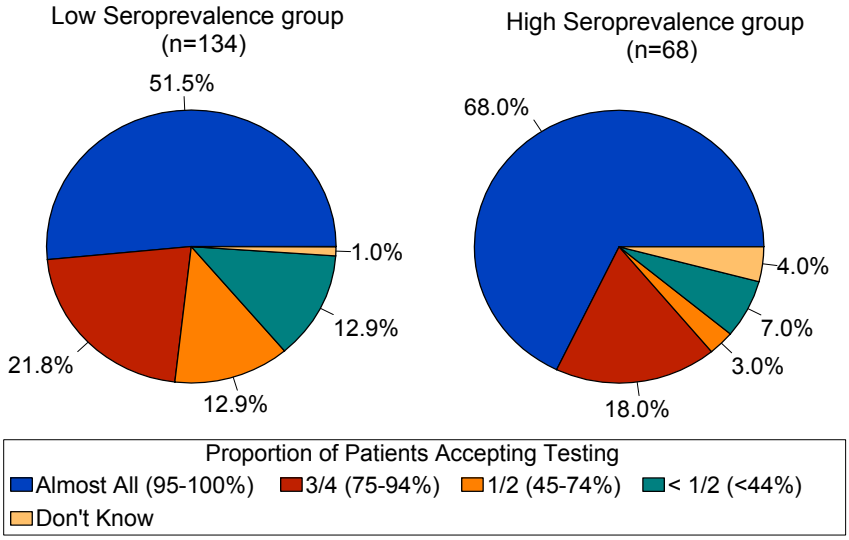
Figure 11: Percent of Women Accepting HIV Testing by Demographic Characteristics, LAC, PHIR, 6/01, n=826



To evaluate compliance to SB889 by private obstetricians, PSD conducted two brief telephone surveys in 1997 and 2000 among private obstetrics/gynecology (OB/GYN) practices in LAC.

Each survey had a sample size of 200 practices. Sampling was stratified by high and low HIV seroprevalence areas based on results from the combined 1988-1995 SCBW surveys. In both the 1997 and 2000 surveys, 99% of the providers reported routinely offering prenatal HIV testing to their patients. Despite this high rate of offering the HIV test, patient acceptance of the HIV test was relatively low. On average, only half of the practices reported that 95-100% of their patients accepted the HIV test. The percentage reporting a 95-100% acceptance rate increased over the two time periods from 47% to 57%, and those in the higher seroprevalence areas continued to have higher test acceptance than those in lower seroprevalence areas (Figure 12).

Figure 12: Prenatal HIV Test Acceptance Rates by Seroprevalence Group, OB/GYN Survey, LAC, PSD, 3/00

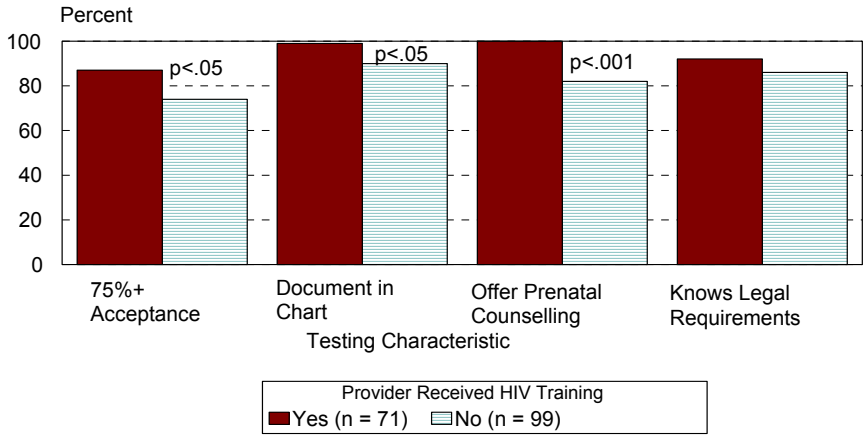


For both time periods, other significant ($p<0.05$) predictors of prenatal HIV test acceptance were: 1) provider offered prenatal HIV counseling, 2) provider received special HIV training, and 3) provider had previously identified an HIV positive woman. Reasons for non-acceptance were similar at both time periods to those found in the Exit Interview Study: 28% reported that women said they were already tested, 23% said were monogamous, and 23% were afraid to know.

At both time periods, less than 40% of the providers had special HIV training in prenatal counseling and testing. Yet, receipt of special training was significantly associated with higher HIV test acceptance, documentation of the test offering in the medical chart, and offering

prenatal HIV information and counseling (Figure 13). Training in HIV counseling and testing is crucial in ensuring that prenatal care providers make HIV testing a routine part of prenatal care.

Figure 13: Percent of OB/GYN Providers with Prenatal Testing Characteristic by HIV Training Status, OB/GYN Survey, LAC, PSD, 3/00



Both OB/GYN surveys showed that over 90% of the providers reported they documented the offering of HIV counseling and testing in the chart. It is unknown whether this documentation was routinely available in the hospital prenatal chart for the labor and delivery staff to evaluate.

PSD reviewed birth records of one private hospital with over 2000 births in a large Asian population to examine whether the offering of the HIV test was documented in the hospital chart. A random sample of prenatal charts in the labor and delivery room were reviewed. Out of 48 charts reviewed, 40 (83%) documented that HIV testing was offered during prenatal care and 8 (17%) had no documentation of offering the HIV test. Of those with documentation, 2 (5%) noted that the patient refused the HIV test. It is assumed that the other 95% accepted the test, although there was no specific notation of test acceptance or test results in the chart.

The Los Angeles County Health Survey (LACHS) is a population based telephone survey of randomly selected adults (18 years and older) conducted by the LACDHS. Women with children 5 years of age or younger were asked if they were offered HIV testing during their pregnancy. Results of the 1999 survey showed that 79% were offered an HIV test during pregnancy with a variation in rates by race/ethnic group: 66% of Asian/Pacific Islander women were offered the test compared to 73% of Whites, 81% of Latinas, and 88% of African-American women.

SUMMARY

Data from these studies suggest that universal offering of voluntary prenatal HIV counseling and testing is the standard of care for all pregnant women in LAC including both the private and public settings. Perinatal HIV transmission has been reduced through prenatal HIV counseling and screening and antiretroviral intervention during pregnancy, labor, and delivery. However, gaps in the prevention system persist and infected babies are still being born indicating a need for the public health's attention.

Not all HIV-exposed children are identified at birth and not all HIV-infected mothers receive treatment. Our estimates of HIV-exposed children not reported to PSD and the percentage lacking evidence of ZDV from the 1998 SCBW suggest that between 20-23% of the HIV-exposed babies and their mothers are missed opportunities for perinatal prevention with ZDV. For prenatal test acceptance rates to increase, additional counseling and HIV information in all public and private prenatal settings must be provided. More providers need training in how to offer HIV testing as part of routine prenatal care. Further studies need to address ways to educate women who refuse testing either because they are monogamous or afraid to know their HIV status. Special attention should be paid to pregnant women born outside the US who might be at a higher risk for test refusal.

The LAC DHS Office of AIDS Programs and Policy (OAPP) has recently created an initiative where promotoras, or women volunteers in the Hispanic and African American communities discuss HIV/AIDS with friends and neighbors at common gathering spots such as grocery stores, laundromats, and beauty salons. The goal of the promotoras is to provide peer-to-peer education to encourage pregnant women to obtain prenatal care, counseling and testing for HIV. This initiative has centered in those SPAs where rates of HIV seroprevalence among childbearing women are highest. OAPP also implemented a social marketing program in these areas of higher seroprevalence to increase public awareness about prevention and prenatal HIV testing.

To maximally reduce perinatal transmission, pregnant women who are IDUs and those with no prenatal care need special attention. Hospital labor and delivery rooms need to be equipped to

identify these women when they present and be equipped to perform rapid HIV counseling and testing. The OraQuick rapid HIV test which uses a finger-prick amount of blood provides results within 20 minutes. It is being used by hospital labor and delivery rooms around the country and should become part of the LAC perinatal prevention strategy. If an HIV-positive woman is identified, all hospitals should be prepared to offer antiretroviral intervention during labor and delivery, begin treatment of the baby, and advise the mother against breastfeeding. The baby and mother should be referred to an HIV specialist. Because the HIV seroprevalence rate in childbearing women in LAC has not declined from 1988 to 1998, primary HIV prevention for all women needs to be a goal in ultimately preventing perinatal HIV.

Recently, PSD reported 18 new cases of HIV acquired during childhood (less than 13 years of age) for 2002 (14). As of January 2003, 97 HIV-exposed babies born in 2002 had been reported and one is HIV-infected. Half of the 18 children reported were born before 1998. HIV-infected children can live asymptomatically for a number of years without coming to medical attention. This underscores the need for doctors to be alert to HIV infection in children with unexplained or chronic illness. Despite our successes in reducing perinatal HIV transmission, there are still children who have yet to be identified and those who will slip through the system so that surveillance, treatment, and prevention efforts need to be maintained. These efforts need to be intensified to eliminate perinatal HIV transmission.

CONCLUSIONS AND RECOMMENDATIONS

Maternal and Child Health (MCH) and HIV, Together: Strategic Integration of MCH and HIV for Perinatal HIV Prevention

Issue: Local MCH and HIV/AIDS systems of care each address perinatal health, yet often in fragmented, uncoordinated ways, missing opportunities to find synergy around broader issues, such as women and children's health. Health promotion and prevention aimed at improving the health and well being of women, infants, children and adolescents in urban communities is generally organized, financed, and administered apart from the HIV/AIDS prevention and advocacy efforts. In a given location, HIV and perinatal health-related collaboration may be flourishing concurrently, but unintentionally competing for scarce resources to impact coinciding at-risk and affected women and children. Inter-departmental dynamics may preclude effective collaboration between MCH and HIV within a public health agency, whose separate activities are reinforced by categorical funding streams, complex organizational structures, and/or politics.

Therefore successful perinatal HIV prevention requires effective cooperation and strategic integration between MCH and HIV to maximize available resources, and to effect systems-level solutions needed for sustainable change. Currently, LAC is participating in the national CityMatch project where MCH, OAPP, PSD, PHIR, and private providers meet quarterly to develop strategies to prevent perinatal transmission.

Increasing Community Awareness: Education and Social Marketing

***Issue*:** Perinatal HIV remains a health problem, which is not fully understood among women in cities that bear the greatest burden of risk and disease, e.g. women of color, younger women, substance abusing women and recent immigrants.

Therefore it is recommended to continue social marketing to increase public awareness about HIV/AIDS prevention; to market specific prevention strategies such that targeted populations of women will respond with healthier behaviors, seek prenatal HIV testing, and follow through with recommended choices and treatment.

Using Data and Surveillance Effectively in Urban Perinatal HIV Prevention.

Issue: Local, state and national data and surveillance of HIV has improved greatly in recent years, but remains insufficient to eliminate perinatal transmission in the urban communities most affected. Newer methods of sentinel pediatric HIV case reviews, akin to infant mortality review (FIMR) are showing promise in cities such as Philadelphia.

Therefore it is recommended to identify the data, surveillance capacity and systems needed to enhance the quality of perinatal HIV data, better understand HIV transmission and better assess, target and evaluate local perinatal HIV prevention efforts.

Identifying HIV+ Women Prenatally and at Labor and Delivery.

Issue: The prenatal HIV test is not universally accepted by all women in LAC. To maximally reduce perinatal HIV transmission, the HIV test must become a part of routine prenatal care with documentation of the results in the patient chart. Documentation will allow for proper treatment during labor and delivery for the HIV-infected woman, and provide another opportunity for an HIV test for those who initially refuse testing. If the mother has no documentation and refuses the test at labor and delivery, the baby should be tested before being discharged from the hospital. This model is currently being implemented in New York and Connecticut with success. Early identification of the HIV-exposed child is a major public health concern. For the HIV-exposed newborn, early treatment and avoidance of breastfeeding may prevent HIV transmission. For the HIV-infected child, early treatment can reduce morbidity and mortality due to HIV/AIDS.

Therefore it is recommended that documentation of the prenatal HIV test result become a part of the prenatal record. If there is no HIV test result, the mother should be offered a rapid HIV test or an expedited ELISA test. If she refuses, the newborn should be tested with a rapid test or an expedited ELISA test so that treatment for those who test HIV positive can begin within the first 24 hours to prevent HIV transmission.

Issue: Women who are at the highest risk of transmitting HIV to their newborns are women without prenatal care. If these women could be identified when they come to a hospital to deliver their babies, and tested with a rapid HIV test, they and their newborns could be treated to prevent HIV transmission. In addition, the HIV-infected mothers could be advised not to breastfeed as it puts the infants at further risk for HIV transmission.

Therefore it is recommended that all hospital labor and delivery rooms develop protocols to identify women with no or limited prenatal care when they present for care. Staff in these settings should be trained in HIV counseling and testing, be prepared to do a rapid HIV test or an expedited ELISA test test, and hospital pharmacies have the proper medications available to treat HIV-infected mothers and newborns.

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DATA SUMMARY TABLES
JUNE 1, 1982 THROUGH DECEMBER 31, 2001
Pediatric Spectrum of HIV Disease (PSD)

1. REPORTED CHILDREN BY CDC CLASSIFICATION AND RESIDENCE AT DIAGNOSIS OF HIV

	L.A. County		Non-LAC		Cumulative		Enrolled in 2001	
	No.	(%)	No.	(%)	No.	(%)	No.	(%)
AIDS	263	(17)	53	(25)	316*	(18)	2	(2)
Infected non-AIDS	222	(15)	61	(28)	283**	(16)	9	(9)
Indeterminate	99	(6)	16	(7)	115	(7)	13	(13)
SUBTOTAL [%]	584	[82]	130	[18]	714	[100]	24	[23]
Uninfected/Seroreverters	947	(62)	85	(40)	1032	(59)	80	(77)
TOTAL [%]	1531	[88]	215	[12]	1746	[100]	104	(100)

2. REPORTED CHILDREN BY TRANSMISSION CATEGORY

	Cumulative	
	No.	(%)
Transfusion recipient	126	(18)
Hemophilia/coagulation disorder	39	(5)
Perinatally acquired	536	(75)
Mother has AIDS/HIV+	*198*	
Mother injection drug user (IDU)	*118*	
Mother had sex with IDU	*63*	
Mother transfused	*21*	
Mother had sex with AIDS/HIV+ man	*116*	
Mother had sex with bisexual	*16*	
Mother had sex with hemophiliac or transfused man	*4*	
Other/Unknown	13***	(2)
TOTAL	714	(100)

3. REPORTED PERINATAL CHILDREN BY RACE AND MOTHER'S RISK FACTOR

	RACE:									
Mother's	White		Black		Hispanic		Other/Unknown		TOTAL	
Risk factor:	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
Unknown, but has HIV/AIDS	11	(14)	93	(46)	91	(38)	3	(21)	198	(37)
IDU	34	(43)	56	(28)	22	(9)	6	(43)	118	(22)
Transfusion	3	(4)	6	(3)	12	(5)	0	(0)	21	(4)
Heterosexual	32	(40)	46	(23)	116	(48)	5	(36)	199	(37)
TOTAL	80	[15]	201	[38]	241	[45]	14	[3]	536	(100)

4. REPORTED CHILDREN BY RACE/ETHNICITY AND AIDS CLASSIFICATION

	CLASSIFICATION:							
	AIDS		Non-AIDS		Cumulative		Enrolled in 2001	
Race:	No.	(%)	No.	(%)	No.	(%)	No.	(%)
White	70	(22)	72	(18)	142	(20)	9	(9)
African-American	99	(31)	141	(35)	240	(34)	37	(36)
Hispanic	138	(44)	168	(42)	306	(43)	57	(55)
Asian	6	(2)	12	(3)	18	(3)	1	(1)
Other/Unknown	3	(1)	5	(2)	8	(1)	0	(0)
TOTAL [%]	316	[44]	398	[56]	714	(100)	104	(100)

***Includes 27 children with an AIDS-defining condition at 13 years of age or older**
****26 children met the adult AIDS criteria with a CD4 cell count<200/μL**
*****Includes 4 suspected and 1 verified case of sexual abuse.**

5. REPORTED CHILDREN BY TRANSMISSION CATEGORY, CDC CLASSIFICATION AND GENDER

	CLASSIFICATION:				GENDER:			
	AIDS		Non-AIDS		Male		Female	
Transmission:	No.	(%)	No.	(%)	No.	(%)	No.	(%)
Transfusion Recipient	88	(28)	38	(10)	74	(20)	52	(15)
Hemophilia/coag disorder	21	(7)	18	(5)	37	(10)	2	(1)
Perinatal*	200	(63)	336	(84)	256	(69)	280	(82)
Other/Unknown	7	(2)	6	(1)	5	(1)	8	(2)
TOTAL [%]	316	(100)	398	(100)	372	(100)	342	(100)

6. REPORTED CHILDREN BY TRANSMISSION CATEGORY AND RACE/ETHNICITY

	RACE:											
	White		African-American		Hispanic		Asian		Other/Unk		Cumulative	
Transmission:	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
Transfusion Recipient	39	(27)	33	(14)	47	(15)	6	(33)	1	(14)	126	(18)
Hemophilia/coag disorder	21	(15)	2	(1)	12	(4)	4	(22)	0	(0)	39	(5)
Perinatal*	80	(56)	201	(84)	241	(79)	7	(39)	7	(86)	536	(75)
Other/Unknown	2	(1)	4	(2)	6	(2)	1	(6)	0	(0)	13	(2)
TOTAL [%]	142	[20]	240	[34]	306	[43]	18	[3]	8	[1]	714	[100]

7. REPORTED CHILDREN BY PRIMARY CARETAKER AND TRANSMISSION CATEGORY

	TRANSMISSION:									
	Perinatal		Trans-fusion		Hemophilia/ coag disorder		Other/ Unknown		Cumulative	
Primary Caretaker:	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
Biologic parents	364	(68)	114	(90)	33	(85)	7	(54)	518	(73)
Other relatives	69	(13)	0	(0)	1	(3)	3	(23)	73	(10)
Foster care	57	(11)	5	(4)	0	(0)	0	(0)	62	(9)
Adoptive parents	20	(4)	2	(2)	1	(3)	2	(15)	25	(4)
Other/Unknown	26	(5)	5	(4)	4	(10)	1	(8)	36	(5)
TOTAL [%]	536	[75]	126	[18]	39	[5]	13	[2]	714	[100]

8. REPORTED PERINATAL CHILDREN BY PRIMARY CARETAKER AND RACE/ETHNICITY

	RACE:								
	White		African-American		Hispanic		Other/Unk		Cumulative	
Primary Caretaker:	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
Biologic parents	52	(65)	112	(56)	190	(79)	10	(71)	364	(68)
Other relatives	12	(15)	34	(17)	22	(9)	1	(7)	69	(13)
Foster care	11	(14)	31	(15)	13	(5)	2	(14)	57	(11)
Adoptive parents	3	(4)	9	(4)	8	(3)	0	(0)	20	(4)
Other/Unknown	2	(3)	15	(7)	8	(3)	1	(7)	26	(5)
TOTAL [%]	80	[15]	201	[38]	241	[45]	14	[3]	536	[100]

***Two due to breast-feeding.**

9. REPORTED CASE-FATALITY RATE BY CDC CLASSIFICATION

CDC Classification:	Total Cases	Alive	Dead	Case-Fatality Rate
AIDS	316	114	202	64%
Infected non-AIDS	283	275	8	3%
Indeterminate	115	108	7	6%
TOTAL	714	497	217	30%

10. REPORTED AIDS CASES BY DIAGNOSES (Cases can have more than 1 diagnosis)

	Cumulative (n=316) No.	New Diagnoses in 2001 No.
Pneumocystis carinii pneumonia	129	2
Other opportunistic infections	194	3
Mycobacterium avium complex	72	0
Candidiasis, esophageal	68	1
CMV disease	49	0
Candidiasis, bronchi, trachea, lungs	17	0
Cryptosporidiosis	16	1
Herpes simplex	10	0
CMV retinitis	10	1
Cryptococcosis	9	0
M. tuberculosis	6	1
Progressive multi-focal leukoencephalopathy	4	0
Histoplasmosis	4	0
Toxoplasmosis of brain	4	0
Atypical *mycobacterium*	2	0
Isosporiasis	2	1
HIV-associated encephalopathy	84	0
Bacterial infections	71	0
HIV wasting syndrome	62	1
Lymphoid interstitial pneumonitis	53	0
Cancers	12	0
TOTAL	605	6

11. REPORTED AIDS CASES BY AGE AT DIAGNOSIS AND TRANSMISSION CATEGORY

Age at Diagnosis (in years)	Transfusion No.	(%)	Hemophilia/ coagulation disorder No.	(%)	Perinatal No.	(%)	Cumulative No.	(%)
<1	5	(6)	0	(0)	88	(44)	93	(29)
1-2	12	(14)	0	(0)	63	(32)	76	(24)
3-4	17	(19)	0	(0)	15	(8)	32	(10)
5-6	8	(9)	0	(0)	12	(6)	21	(7)
7-8	10	(11)	3	(14)	9	(5)	22	(7)
9-10	10	(11)	5	(24)	8	(4)	23	(7)
11-12	14	(16)	4	(19)	2	(1)	22	(7)
13+	12	(14)	9	(43)	3	(2)	27	(9)
TOTAL	88	(100)	21	(100)	200	(100)	316*	(100)
Mean/Median Age (in months)	90/89		160/143		30/15		57/31	

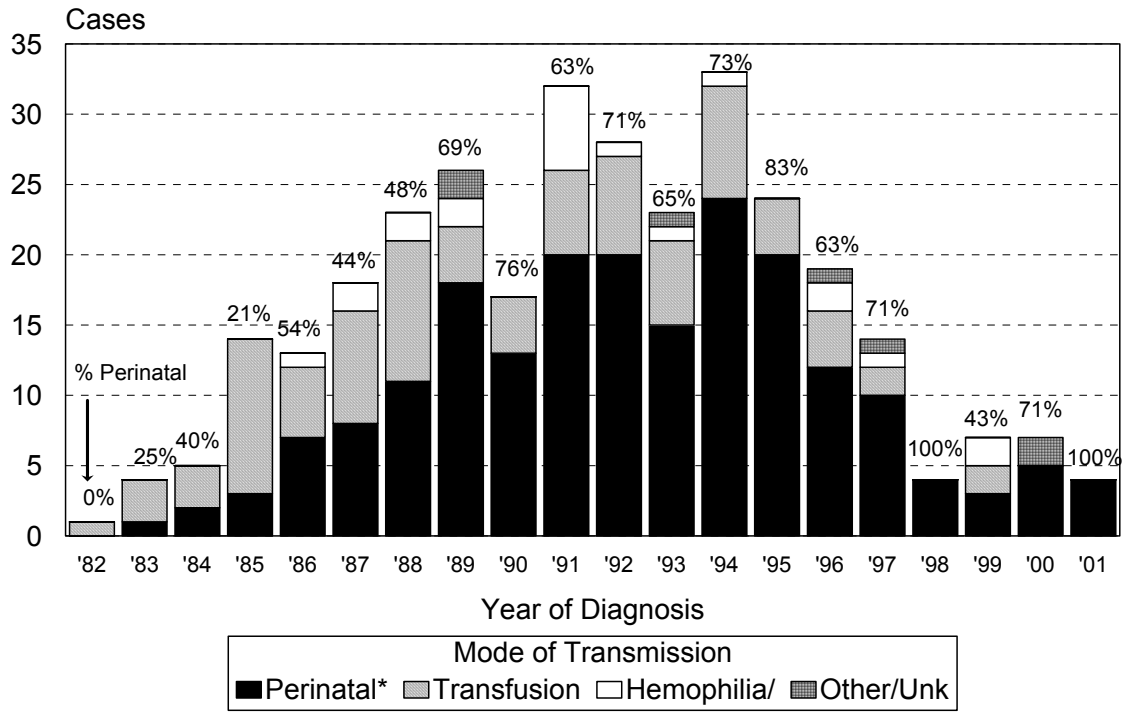
*Includes cases where mode is other/unknown.

12. REPORTED AIDS CASE-FATALITY BY HALF-YEAR DIAGNOSIS

Diagnosis Date:	No. of Cases	No. of Deaths	Case-fatality Rate	Cumulative Case-Fatality Rate
1982 Jan.-June				
July-Dec.	1	1	100%	100%
1983 Jan.-June	2	2	100%	100%
July-Dec.	2	2	100%	100%
1984 Jan.-June	4	4	100%	100%
July-Dec.	1	1	100%	100%
1985 Jan.-June	6*	4	67%	88%
July-Dec.	8*	7	88%	88%
1986 Jan.-June	3	3	100%	89%
July-Dec.	10	10	100%	92%
1987 Jan.-June	9	9	100%	93%
July-Dec.	9*	7	78%	91%
1988 Jan.-June	10*	7	70%	88%
July-Dec.	13**	9	69%	85%
1989 Jan.-June	12**	9	75%	83%
July-Dec.	14*	12	86%	84%
1990 Jan.-June	9*	8	89%	84%
July-Dec.	8	8	100%	85%
1991 Jan.-June	16*	12	75%	84%
July-Dec.	16*	13	81%	84%
1992 Jan.-June	19*	13	68%	82%
July-Dec.	9*	7	78%	82%
1993 Jan.-June	12	9	75%	81%
July-Dec.	11	7	64%	80%
1994 Jan.-June	14****	7	50%	78%
July-Dec.	19***	12	63%	77%
1995 Jan-June	14	7	50%	76%
July -Dec.	10**	4	40%	74%
1996 Jan-June	12*	4	33%	73%
July-Dec.	7	1	14%	71%
1997 Jan-June	11****	1	9%	69%
July-Dec.	3	0	0%	68%
1998 Jan-June	3	0	0%	67%
July-Dec.	1	0	0%	67%
1999 Jan-June	4	1	25%	67%
July-Dec.	3	0	0%	66%
2000 Jan-June	3	1	33%	66%
July-Dec.	4	0	0%	65%
2001 Jan-June	2	0	0%	64%
July-Dec.	2	0	0%	64%
Total AIDS Cases	316	202	64%	64%

*One case is lost to follow-up.
**Two cases are lost to follow-up.
***Three cases lost to follow-up.
****Four cases lost to follow-up

13. REPORTED AIDS CASES BY YEAR OF DIAGNOSIS AND MODE OF TRANSMISSION



*Includes one due to breastfeeding

14. IMMUNOLOGIC STATUS FORHIV- INFECTED CHILDREN ALIVE AT LAST MEDICAL CONTACT BASED ON AGE-SPECIFIC CD4 COUNT AND PERCENTAGE (n=291)

	IMMUNOLOGIC STATUS:									
	Severe Suppression		Moderate Suppression		Normal		Unknown		Total	
Clinical Status	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
Severe symptoms	66	(42)	17	(17)	3	(11)	0	(0)	86	(30)
Moderate symptoms	72	(46)	57	(56)	12	(43)	1	(33)	142	(49)
Mild symptoms	15	(9)	15	(15)	5	(18)	0	(0)	35	(12)
Asymptomatic	5	(3)	13	(13)	8	(29)	2	(67)	28	(10)
TOTAL	158	[54]	102	[35]	28	[10]	3	[100]	291	(100)

15. REPORTED CHILDREN CURRENTLY FOLLOWED* BY AGE AT LAST CONTACT AND MODE OF TRANSMISSION

	TRANSMISSION:									
Age at last	Perinatal		Transfusion		Hemophilia		Other/ Unknown		Cumulative	
Contact:	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
0-5 mos.	46	(16)	0	(0)	0	(0)	0	(0)	46	(13)
6-11 mos.	3	(1)	0	(0)	0	(0)	0	(0)	3	(1)
12-23 mos.	9	(3)	0	(0)	0	(0)	0	(0)	9	(3)
2 yrs.	4	(1)	0	(0)	0	(0)	0	(0)	4	(1)
3 yrs.	9	(3)	0	(0)	0	(0)	0	(0)	9	(3)
4 yrs.	11	(4)	0	(0)	0	(0)	1	(13)	12	(4)
5 yrs.	10	(3)	0	(0)	0	(0)	0	(0)	10	(3)
6-7 yrs.	47	(16)	0	(0)	0	(0)	1	(13)	48	(14)
8-9 yrs.	48	(17)	1	(2)	0	(0)	0	(0)	49	(14)
10-11 yrs.	43	(15)	0	(0)	0	(0)	0	(0)	43	(13)
12 yrs.	13	(5)	0	(0)	0	(0)	0	(0)	13	(4)
13+ yrs.	44	(15)	41	(98)	5	(100)	6	(75)	96	(28)
TOTAL	287	(100)	42	(100)	5	(100)	8	(100)	342	(100)
Mean/Median Age (in months)	93/98		217/219		238/251		130/156		111/111	

16. REPORTED CHILDREN CURRENTLY FOLLOWED* BY HOSPITAL** AND CDC CLASSIFICATION

	CDC CLASSIFICATION:		
Hospital:	Infected	Indeterminate	Total
Cedars-Sinai	15	3	18
Childrens	117	2	119
Harbor General	17	4	21
Kaiser hospitals	9	1	10
LAC+USC	58	19	77
Martin Luther King, Jr.	14	7	21
Mem. Cntr. of Long Beach	29	6	35
UCLA	32	9	41
Other Hospitals (n=8)	0	0	0
TOTAL	291	51	342

17. REPORTED CHILDREN BY HOSPITAL** AND LATEST CDC CLASSIFICATION

	CDC CLASSIFICATION:			
Hospital:	Infected	Indeterminate	Uninfected	Total
Cedars-Sinai	40	5	41	86
Childrens	252	11	143	406
Harbor General	29	8	73	110
Kaiser hospitals	25	3	25	53
LAC+USC	74	33	328	435
Martin Luther King, Jr.	23	12	73	108
Mem. Cntr. of Long Beach	59	15	191	265
UCLA	68	25	155	248
Other Hospitals (n=8)	28	4	3	35
TOTAL	598	116	1032	1746

***Includes only infected and indeterminate children still alive and not lost to follow-up. Does not include uninfected/seroreverters.**
****Defined as current hospital or hospital at time of death, or hospital at time when lost to follow-up.**

18. REPORTED CHILDREN BY CDC CLASSIFICATION AND ENROLLMENT YEAR

	CDC CLASSIFICATION:									
	AIDS		Infected Non-AIDS		Indeterminate		Uninfected		Total	
Enrollment Year(s)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
1988 - '90	172	(45)	83	(22)	11	(3)	118	(31)	384	(100)
1991 - '92	54	(22)	43	(17)	10	(4)	137	(56)	244	(100)
1993 - '94	39	(15)	43	(16)	2	(1)	182	(68)	266	(100)
1995 - '96	19	(7)	52	(19)	11	(4)	189	(70)	271	(100)
1997	9	(7)	20	(15)	10	(8)	92	(70)	131	(100)
1998	8	(6)	24	(17)	7	(5)	103	(73)	142	(100)
1999	4	(4)	7	(6)	11	(10)	92	(81)	114	(100)
2000	7	(7)	7	(7)	13	(13)	71	(72)	98	(100)
2001	2	(2)	9	(9)	13	(13)	80	(77)	104	(100)

19. PERCENT OF PERINATALLY EXPOSED CHILDREN BORN 1995 - 2001 WITH MATERNAL ZDV BY BIRTH YEAR

	BIRTH YEAR:													
	'95 (n=141)		'96 (n=101)		'97 (n=104)		'98 (n=108)		'99 (n=102)		'00 (n=95)		'01 (n=96)	
	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
a. Mother in prenatal care	95	(68)	72	(71)	90	(87)	97	(84)	91	(89)	88	(93)	86	(90)
b. Mother received ZDV during pregnancy	92	(66)	66	(65)	80	(77)	91	(85)	82	(80)	78	(82)	82	(85)
c. Mother received ZDV during labor/delivery	83	(59)	61	(60)	78	(76)	91	(85)	88	(86)	83	(87)	83	(86)
d. Mother received ZDV during pregnancy and L&D	79	(56)	54	(53)	74	(71)	88	(82)	79	(77)	75	(79)	78	(81)
e. Infant received neonatal ZDV	98	(70)	85	(84)	88	(85)	88	(81)	96	(94)	91	(96)	95	(99)

20. TYPE OF DELIVERY AMONG THE PERINATALLY EXPOSED CHILDREN BORN 1995-2001

	DELIVERY TYPE:							
	Vaginal		C-Section		Unknown		Total	
Birth Year	No.	(%)	No.	(%)	No.	(%)	No.	(%)
1995	101	(73)	28	(20)	12	(8)	141	(100)
1996	62	(61)	30	(30)	9	(9)	101	(100)
1997	82	(79)	18	(17)	4	(4)	104	(100)
1998	71	(66)	33	(31)	4	(4)	108	(100)
1999	47	(46)	54	(53)	1	(1)	102	(100)
2000	38	(40)	55	(58)	2	(2)	95	(100)
2001	39	(41)	55	(57)	2	(2)	96	(100)

21. PERINATALLY EXPOSED CHILDREN BORN 1995-2001 BY LATEST CDC CLASSIFICATION AND BIRTH YEAR

	CDC CLASSIFICATION:									
	AIDS		Infected Non AIDS		Indeterminate		Uninfected		Total	
Birth Year	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
1995	5	(4)	19	(13)	7	(5)	110	(78)	141	(100)
1996	6	(6)	12	(12)	3	(3)	80	(79)	101	(100)
1997	4	(4)	5	(5)	10	(10)	85	(82)	104	(100)
1998	2	(2)	3	(3)	9	(8)	94	(87)	108	(100)
1999	1	(1)	6	(6)	12	(12)	83	(81)	102	(100)
2000	2	(2)	3	(3)	13	(14)	77	(81)	95	(100)
2001	3	(3)	3	(3)	14	(15)	76	(79)	96	(100)
TOTAL	23	(3)	51	(7)	68	(9)	605	(81)	747	(100)

GLOSSARY

CDC PEDIATRIC HIV-CLASSIFICATION SYSTEM*:

HIV INFECTED

- Child < 18 months of age: at least two positive HIV detection tests (PCR, p24 antigen, or culture) (excluding cord blood specimens); or
- Child < 18 months of age: only one positive HIV detection test (PCR, p24 antigen, or culture) and no subsequent negative HIV detection or antibody test (presumed infected); or
- Child ≥ 18 months of age: HIV antibody positive; or
- Child diagnosed by a physician as HIV infected; or
- Conditions that meet criteria included in the 1987 pediatric surveillance case definition for AIDS

HIV UNINFECTED

- Child with at least two negative HIV detection tests (PCR or culture) both of which were performed at ≥ 1 month of age, and one of which is at ≥ 4 months of age; or
- Child with at least 2 negative HIV antibody tests at ≥ 6 months of age; or
- Child with one negative HIV detection test (PCR or culture) performed at ≥ 4 months of age and no positive HIV virologic tests (presumed uninfected); or
- Child 6 – 18 months of age: at least one negative HIV antibody test and no positive HIV detection tests and has not had an AIDS – defining condition (presumed infection); or
- Child ≥ 18 months of age: HIV antibody negative; or
- Child with one positive HIV virologic test with at least 2 subsequent negative virologic tests, at least 1 of which is ≥ 4 months of age; or at least 2 negative HIV antibody tests results at least one of which is at ≥ 6 months of age (presumed infection); or
- Child diagnosed by a physician as uninfected

HIV INDETERMINATE

- Child with insufficient data to categorize as infected or uninfected; or
- Child with conflicting data: e.g., positive HIV detection test and negative HIV antibody test; or
- Child lost to follow-up before determination of HIV status

*Centers for Disease Control and Prevention. *Appendix: Revised Surveillance Case Definition for HIV Infection*. December 10, 1999. MMWR: Vol 48 (RR13) p 1013-1016.